

CLAIMS

We claim:

1. A device for making electrical contact with at least one tension member in a load bearing member used in an elevator system and for providing a restraining function, comprising:

a connector portion having at least one conductive member that is adapted to penetrate through a coating over at least one tension member and a load transferring member that is adapted to penetrate through a coating over at least one tension member; and

a restraining portion having an opening with an inside dimension that is less than an outside dimension of the connector portion such that the portion of the belt associated with the connector portion remains on a selected side of the restraining portion.

2. The device of claim 1, wherein the restraining portion comprises at least one of steel or a ceramic material.

3. The device of claim 2, wherein the restraining portion comprises a plate.

4. The device of claim 1, wherein the connector portion includes a first clamping member supporting the electrically conductive connector member and a second clamping member supporting the load transferring member.

5. The device of claim 4, including a resilient locking member holding the first clamping member and the second clamping member together with a selected amount of tension against the portion of the belt that is received between the clamping members.

6. The device of claim 5, wherein the resilient locking member comprises a threaded member and a spring washer.

7. The device of claim 4, wherein the clamping members comprise an electrically conductive material and including insulation isolating the connector member and the load transferring member from the corresponding clamping members.

8. The device of claim 7, wherein the clamping members comprise steel.

9. The device of claim 4, wherein the clamping members comprise an electrically non-conductive, heat resistant material.

10. The device of claim 9, wherein the clamping members comprise a ceramic material.

11. The device of claim 1, wherein at least one of the conductive member or the load transferring member has a portion aligned generally perpendicular to a direction of penetration into the corresponding tension member.

12. A method of establishing electrically conductive contact with at least one tension member in a load bearing member used in an elevator system and restraining movement of the load bearing member, comprising the steps of:

securing a restraining portion in a fixed position relative to a selected structure in the elevator system;

forcing at least one electrically conductive connector member at least partially through a coating over the tension member to make an electrically conductive contact between the connector member and the tension member;

forcing a load transferring member at least partially through the coating sufficient to make a mechanically secure contact between a tension member and the load transferring member; and

positioning the connector member and the load transferring member on a selected side of the restraining portion such that the associated part of the load bearing member remains on the selected side.

13. The method of claim 12, including supporting the connector member and the tension member within a connector portion that has an outside dimension that is greater than an inside dimension of an opening through the restraining portion.

14. The method of claim 13, wherein the connector portion includes a first clamping member supporting the electrically conductive connector member and a second clamping member supporting the load transferring member.

15. The method of claim 14, including resiliently biasing the clamping members against the belt.

16. The method of claim 14, wherein the clamping members comprise an electrically conductive material and including insulation isolating the connector member and the load transferring member from the corresponding clamping members.

17. The method of claim 14, wherein the clamping members comprise steel.

18. The method of claim 14, wherein the clamping members comprise an electrically non-conductive, heat resistant material.

19. The method of claim 18, wherein the clamping members comprise a ceramic material.

20. The method of claim 11, wherein the restraining portion comprises at least one of steel or a ceramic material.